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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/733,859	12/11/2003	Gerd Hexels	LORWER P27AUS	8101
20210	7590	02/08/2006	EXAMINER	
DAVIS & BUJOLD, P.L.L.C. FOURTH FLOOR 500 N. COMMERCIAL STREET MANCHESTER, NH 03101-1151			RUDDOCK, ULA CORINNA	
			ART UNIT	PAPER NUMBER
			1771	

DATE MAILED: 02/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/733,859	Applicant(s) HEXELS, GERD	
	Examiner Ula C. Ruddock	Art Unit 1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 23 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The Examiner has carefully considered Applicant's amendment and accompanying response filed November 23, 2005. All rejections have been maintained.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

3. Claims 17-19, 21-24, 28-33 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over DE 29716362 (DE '362) in view of Pusch et al. (US 4,308,882) DE' 362 discloses a thermal camouflage tarpaulin that screens heat sources from recognition in a thermal image. The construction comprises a textile substrate with glass filaments. On one side there is a silicone elastomer coating containing aluminum powder and on the other side of the glass textile there is a silicone elastomer containing metal pigments. The textile is a glass fabric with plain weave. A plastic fiber system with polyester binding fiber can be used. The silicone elastomer is crosslinked. The metal pigments that are used contain chromium oxide. Regarding claim 33, it should be noted that the method of forming an article is not germane to the issue of patentability of the article itself. Therefore, the limitation of a "transfer coating method" has not been given patentable weight. A complete translation of this document has been ordered. DE '362 discloses the claimed invention except for the teaching that the coating containing the color pigments is in the form of a polyurethane coating.

Pusch et al. (US 4,308,882) disclose tents that provide protection against modern sight and IR-optical search methods (abstract). The fabrics used in the tents include glass fiber fabrics that

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are coated with polyurethane. The fabric has a weight ranging from 20-400 g/m² (col 2, ln 3-8). It would have been obvious to one having ordinary skill in the art to have used Pusch's polyurethane in place of the silicone elastomer of DE '362, motivated by the desire to create a material that has high strength. It also would have been obvious to have used Pusch's teaching of a fabric weighing 400 g/m² on the fabric of DE '362, motivated by the desire to create a fabric that is durable.

Regarding claims 28 and 29, it should be noted that the amount of aluminum powder and the amount of color pigments are result effective variables. The amount of aluminum powder directly affects the amount of heat reflecting properties. The amount of color pigment directly affects the visibility of the fabric. Therefore, it would have been obvious to one having ordinary skill in the art to have used 20-40% aluminum powder and 10-50% color pigments, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F. 2d 272, 205 USPQ 215 (CCPA 1980). In the present invention, one would have optimized the amount of aluminum powder and color pigment, motivated by the desire to obtain a material that has decreased thermal radiation and increased heat reflecting properties.

Rejection is maintained.

4. Claims 20 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over DE 29716362 (DE '362) in view of Pusch et al. (US 4,308,882) as applied to claim 17 above, and further in view of Fels et al. (US 5,514,457). DE '362 and Pusch et al. disclose the claimed invention except for the teaching that the fabric is a twill fabric.

Fels et al. (US 5,514,457) disclose a textile structure for protective clothing. The textile provides protection against stabbing, cutting, fragments, and bullets (abstract). The textiles may

be used in military applications (col 6, ln 65) and may be camouflage (col 7, ln 5-6). The fabrics may be made into twill or cross-twill weaves (col 8, ln 53-54) and col 9, ln 20). It would have been obvious to one having ordinary skill in the art to have used Fels' teaching of a twill or cross-twill weave fabric on the fabric of DE '362 and Pusch et al., motivated by the desire to create a material that has increased strength, firmness, and durability.

Rejection is maintained.

5. Claim 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over DE 29716362 (DE '362) in view of Pusch et al. (US 4,308,882) as applied to claim 17 above, and further in view of McKinney et al. (US 4,756,465). DE '362 and Pusch et al. disclose the claimed invention except for the teaching that the polyurethane is crosslinked.

McKinney et al. (US 4,756,465) disclose a lightweight tenting fabric that has a base coat of a urethane on both surfaces of a woven substrate (abstract). Pigments are also desirable in making the tents for military usage by using camouflage pints on one side and solid infrared reflective color on the other side (col 5, ln 12-18). The urethane coating composition can be crosslinked (col 4, ln 25-33). It would have been obvious to one having ordinary skill in the art to have used the crosslinkers of McKinney et al. on the polyurethane coating of DE '362 and Pusch, motivated by the desire to coating that has enhanced adhesion to the glass substrate.

Rejection is maintained.

6. Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over DE 29716362 (DE '362) in view of Pusch et al. (US 4,308,882) as applied to claim 17 above, and further in view of

Bussiere (US 2,817,371). DE '362 and Pusch et al. disclose the claimed invention except for the teaching that the glass fabric is at least one of a twill binding and a cross-twill binding.

Bussiere (US 2,817,371) discloses fabrics that include glass fibers (col 2, ln 10-12) formed into binder threads which serve to maintain the warp and filling ends in proper position. The binding threads are formed into a twill weave which helps secure the ends into position (col 2, ln 55-60). It would have been obvious to one having ordinary skill in the art to have used Bussier's twill binding along the fabric of DE '362 and Pusch, motivated by the desire to create a fabric where the warp and weft are secured and in their proper position.

Response to Arguments

7. Applicant's arguments filed November 23, 2005, have been fully considered but they are not persuasive for the reasons set forth. Applicant argues that the placement of the polyurethane on the Pusch reference differs from that of the present invention. This argument is not persuasive because the Examiner is using the polyurethane coating disclosed by Pusch at column 2, lines 5-8 to replace one of the silicone elastomeric coating layers of the DE '362 reference. As seen in Figure of DE '362, the coating layers (reference points 2 and 4) are directly on the glass fabric layer (reference point 1). Furthermore, one would have been motivated to combine the DE '362 and Pusch references because the references are analogous. Applicant also argues that Fels is non-analogous and can be properly combined with DE '362 and Pusch. This argument is not persuasive because all of the references are all drawn to protective coated camouflage fabric structure. Therefore, the references are properly combinable. Furthermore, one having ordinary skill in the art would have used the Fels' teaching of a twill fabric because it is well known that twill

fabrics provide additional dimensional stability to the fabric structure. Therefore, all rejections have been maintained.

Conclusion

8. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ula C. Ruddock whose telephone number is 571-272-1481. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel H. Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

UCR




Ula C. Ruddock
Primary Examiner
Tech Center 1700